AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method for accelerating the rate of mucociliary clearance in a subject with mucociliary dysfunction comprising administering to the subject an effective mucociliary clearance stimulatory amount of a composition comprising a Kunitz-type serine protease inhibitor and a physiologically acceptable carrier.

2. (Original) The method according to claim 1, wherein the composition is administered to the lung airways.

3. (Original) The method according to claim 1, wherein said composition is administered directly by aerosolization.

4. (Original) The method according to claim 1, wherein said composition is administered directly as an aerosol suspension into the mammal's respiratory tract.

5. (Original) The method according to claim 4, wherein said aerosol suspension includes respirable particles ranging in size from about 1 to about 10 microns.

6. (Original) The method according to claim 4, wherein said aerosol suspension includes respirable particles ranging in size from about 1 to about 5 microns.

7. (Original) The method according to claim 4, wherein said aerosol suspension is delivered to said subject by a pressure driven nebulizer.

8. (Original) The method according to claim 4, wherein said aerosol suspension is delivered to said subject by an ultrasonic nebulizer.

9. (Original) The method according to claim 4, wherein said aerosol suspension is delivered to said subject by a non-toxic propellant.

10. (Previously presented) The method according to claim 1, wherein said carrier is a member selected from the group consisting of a buffered solution, an isotonic saline, normal saline, and combinations thereof.

11. (Withdrawn) The method according to claim 1 wherein the Kunitz-type serine protease inhibitor is aprotinin.

12. (Withdrawn) The method according to claim 1, wherein the Kunitz-type serine protease inhibitor comprises the amino acid sequence: (SEQ ID NO.: 49).

13. (Withdrawn) The method according to claim 1, wherein the Kunitz-type serine protease inhibitor comprises the amino acid sequence: (SEQ ID NO.: 2), (SEQ ID NO.: 45), (SEQ ID NO.: 47), (SEQ ID NO.: 70), or (SEQ ID NO.: 71).

14. (Previously presented) The method according to claim 1, wherein the Kunitz-type serine protease inhibitor comprises the amino acid sequence: (SEQ ID NO.: 4), (SEQ ID NO.: 5), (SEQ ID NO.: 6), (SEQ ID NO.: 7), (SEQ ID NO.: 3), (SEQ ID NO.: 50), (SEQ ID NO.: 1), or (SEQ ID NO.: 52).

15. (Withdrawn) The method according to claim 1, wherein the Kunitz-type serine protease inhibitor comprises the amino acid sequence: (SEQ ID NO.: 8).

16. (Original) The method according to claims 12, 13, 14 or 15, wherein the Kunitz-type serine protease inhibitor is glycosylated.

17. (Original) The method according to claims 12, 13, 14 or 15, wherein the Kunitz-type serine protease inhibitor contains at least one intra-chain cysteine-cysteine disulfide bond.

18. (Previously presented) The method according to claims 12, 13, 14, or 15, wherein the Kunitz-type serine protease inhibitor contains at least one intra-chain cysteine-cysteine disulfide bond selected from the cysteine-cysteine paired groups consisting of CYS11-CYS61, CYS20-CYS44, CYS36-CYS57, CYS106-CYS156, CYS115-CYS139, and CYS131-CYS152, wherein the cysteine residues are numbered according to the amino acid sequence of SEQ ID NO.: 52.

19. (New) A method for accelerating the rate of mucociliary clearance in a subject in need of such treatment comprising administering to the subject an effective mucociliary clearance stimulatory amount of a composition comprising a Kunitz-type serine protease inhibitor and a physiologically acceptable carrier, wherein the Kunitz-type serine protease inhibitor is selected from the group consisting of: SEQ ID NO:49; SEQ ID NO:2; SEQ ID NO:45; SEQ ID NO:47; SEQ ID NO:71; SEQ ID NO:70; SEQ ID NO:4; SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7; SEQ ID NO:3; SEQ ID NO:50; SEQ ID NO:1; SEQ ID NO:52; and SEQ ID NO:8.

20. (New) The method according to claim 19, wherein the composition is administered to the lung airways.

21. (New) The method according to claim 19, wherein said composition is administered directly by aerosolization.

22. (New) The method according to claim 19, wherein said composition is administered directly as an aerosol suspension into the mammal's respiratory tract.

23. (New) The method according to claim 22, wherein said aerosol suspension includes respirable particles ranging in size from about 1 to about 10 microns.

24. (New) The method according to claim 22, wherein said aerosol suspension includes respirable particles ranging in size from about 1 to about 5 microns.

25. (New) The method according to claim 22, wherein said aerosol suspension is delivered

to said subject by a pressure driven nebulizer.

26. (New) The method according to claim 22, wherein said aerosol suspension is delivered to said subject by an ultrasonic nebulizer.

27. (New) The method according to claim 22, wherein said aerosol suspension is delivered to said subject by a non-toxic propellant.

28. (New) The method according to claim 19, wherein said carrier is a member selected from the group consisting of a physiologically buffered solution, an isotonic saline, normal saline, and combinations thereof.

29. (New) The method according to claim 19, wherein the Kunitz-type serine protease inhibitor is glycosylated.